



CENTER LINE

A Publication of Waukesha County's Retzer Nature Center

Spring 2008

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- ♦ *Friends* Annual Meeting
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- ♦ Bird & Wildflower Hike at Menomonee Park
- ♦ Bird Hike at Fox River Park

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DON'T GET LEFT INSIDE!

There's something going on. Everywhere you look today, issues of the land and environment are boiling up in our public awareness as never before. But it's a symptom of something deeper. Something is happening. People are waking up to something that they've always known, way down deep. It seems to have been sleeping for awhile, in need of re-discovery. But that re-discovery is happening.

Don't get left inside.

The old 19th century naturalist-explorers lived this, famously—figures as diverse as Alexander von Humboldt, Meriwether Lewis, Henry David Thoreau, Charles Darwin, Alfred Wallace, John Muir and Theodore Roosevelt—through dangerous treks, dramatic adventures, and secret retreats. They learned, and loved, the land—through heroic experiences.

Aldo Leopold expressed it in a more accessible way in *A Sand County Almanac*, in which the "scientist observing" turns out also to be the "boy playing"—loving the land's wonderful dramatic production, even as he learns the details of the script, and the cast of marvelous characters.

Many people 50-and-over remember a childhood in which more open space and more leisure time combined to create endless opportunities for adventure. We climbed trees, built forts, made hiking sticks, picked flowers, caught fish, shot our BB guns, chased rabbits, and learned stuff—even as we became aware that the land was a place for fun, and for great times. That awareness has stayed with us, and it's a big thing in our lives still.

But something seems to get in the way of that awareness, for younger people. The world seems to have gotten crowded, and busy, and less safe. Organized activities have replaced leisure time for play, even as vacant lots and open space have gone away. The infatuation with cyberspace has eclipsed (for awhile) the reality of natural space. It seems that kids stopped going outside. Author Richard Louv relates the causes and consequences of this new phenomenon of "nature deficit disorder", in his 2005 book *Last Child in the Woods*. Some of us have tried to buck this trend, have tried to keep the flame of direct nature experience alive. There's an innate human need for nature, experienced directly (and not just on National Geographic TV specials, or Animal Planet). There's an itch that can't be scratched, except by being out in it.

Don't get left inside.

Those of us who teach about nature want the kids to know what we know: that nature is fun, mysterious, cool, beautiful, and awesome—and that it just gets better, the more time you spend with it, and the more you learn about it.

(Continued on page 2)

(Don't Get Left Inside... continued)

And we are preservationists—we know that once you fall in love with nature, you'll want to save it.

2008 is a special year at Retzer Nature Center. It's a year in which we're dedicated to getting you back outside, back in touch. Pretty much everything we're doing in '08 has that goal. We've got cool new program offerings for parents and little kids, to get you outside discovering together. We've got treks and adventures for all ages. We've got prairies and ponds and pine woods. We've got great stuff for teachers and students, to put adventure and discovery back in school. We've got caterpillars and cattails and campfires. We've got scout badges waiting to be earned. We've got heroic weekend warrior campaigns, doing battle against weedy invaders. We've got birds and bats, owls and oaks, frogs and fawns. We've even got six sessions of Common Sense Conversations about the Big Stuff—to learn the facts about the big issues, and what we all can do in our own backyard.

2008 is the year we re-dedicate to the re-awakening that's happening, of what we all know, deep down.

Don't get left inside.

Larry



ABRACA DRABA

As seasons roll along, I periodically take time to stroll with Aldo Leopold in A Sand County Almanac. There is always an attraction to the tiny plant on page twenty six. Never having seen the bloom, and never having run into or over anyone who has seen this bloom, I am anxious to meet up with it. The small recluse was given the name Draba.

Aldo Leopold writes —

"Within a few weeks now Draba, the smallest flower that blows, will sprinkle every sandy place with small blooms ... Draba asks, and gets, but scant allowance of warmth and comfort; it subsists on the leavings of unwanted time and space ... After all it is no spring flower, but only a postscript to a hope. Draba plucks

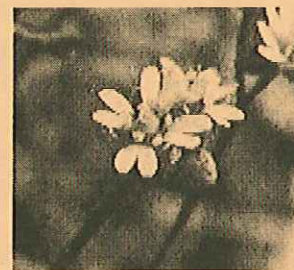
no heartstrings ... It's color is plain white. Nothing eats it; it is too small ... No poets sing of it ..."

On behalf of the poets, a change will be made. Until then, research digging will open up a light on this tiny subject.

Draba finds a home among Whitlow grasses. Folklore from jolly old England states that a Whitlow was an inflammation found under or around the toenails or fingernails. Medicinal poultices were made from the acidic juices of the Whitlow grasses.

Draba comes from the Greek word drape which translates "sharp" or "acid" and refers to the burning taste of its leaves. Reptans means having creeping or rooting stems. Put it all together and it spells Draba reptans—one plant member in the family of Brassicaceae. This member of the family is a winter annual—it sprouts in the fall, survives the harsh winter and begins to grow in early spring. Draba reptans is native to Wisconsin and blooms March through June, if one can find it. The plant is also known as Carolina Whitlow Grass or common Whitlow Grass.

The plant is a 2-10" forb (broad-leaved wildflower), and has 1/3" wide petals which are white in color and four in number. Petals are rounded at the top. Inflorescence (flower cluster) is a dense cluster or raceme (the axis bears flowers on short stems in



succession, toward the apex) of smooth-stalked flowers. Flowers bloom April-May. Fruit of the flower is an elongated pod, stalks usually 1/3 to 1/2 as long as the pod. Basal leaves are blunt, toothless, and hairy and at the base of the stem. Draba

reptans is found in disturbed sites, prairies and in rocky, sandy soil. Another habitat is the dolomite glade, especially where limestone is at or near the surface. Could it be that the tiny flowers may be in our own back yard?

Another Draba in the blooming Brassicaceae family is Draba verna or Spring Draba. This very teeny, tiny plant sometimes goes by names like Shadflower or Nailwort or Vernal Whitlow Grass. Sometimes plain old Whitlow Grass. Whatever the moniker, it is a native Wisconsinite. Although once thought to have been introduced to America from Europe, Draba verna is now considered a native to both continents.



Stems of Spring Draba can be single or multiple, and rise at the plant's base from a small taproot. Stems grow to a magical 3" tall. If the magic wand is waved twice, the stem might make 3 1/4" height. Green leaves of this small plant form a disk of foliage as a basal rosette. Leaves are approximately 1/8" wide and usually less than 1/2" long. Lowest of the rosette leaves are petiolate (stalked) and spatula shaped. Upper leaves in the rosette are sessile (attached directly to the base), spatulate, and acute (ending in a sharp point). Growths of hairs or trichomes on the leaves are forked, and have levitations on the skin resembling blisters or pimples. And they used the leaves of this plant to heal this condition?

Draba verna bears a many seeded, smooth, ellipsoid or ovoid shaped fruitpod. Draba's fruitpod is about 1/4" long and 1/8" wide. Small, but well proportioned, Spring Draba has four smooth petals. However, petals in the verna species are clawed and deeply divided. When scanning a picture of the species, it appears the size of a capitol O on my typewriter. Isn't that amazing? Draba verna can be seen flowering (February-April), if one can find it. This Draba isn't fussy with habitat site. Grassy and rocky places, pastures, roadsides, cultivated fields, even waste grounds will do. So why haven't I ever stumbled over this petite bloom?

There are seventeen other native species of Draba that can be found in our Midwest area. Maybe a path will be found.

Now let the poet sing of it—

If at my convenience
I could raise a magic wand
strike the ancient prairie soil
exhume this petite young bloom
hidden beneath early Spring light
and expose her exquisite burial site

Then for witness to
her four pure-white petals
so tiny, not ever noticed
would she with Spring relenting
share this view
ABRACA DRABA please do, please do

See you on the trail,

Shirley Blanchard

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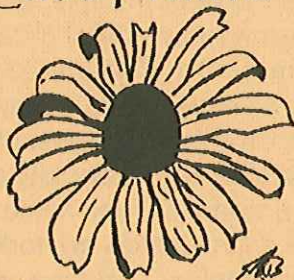
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The Last Prairie CYCLES

Are your ears still ringing? OK, so maybe this horse is kicked and buried, but the monotonous screams of the 17-year Harvestfly of Brood XIII are no more for another 16 ½ years, and that deserves yet another article (plus, we regular columnists get the luxury to pick what we wish to learn and write about). You may even find there is something in here the newspapers missed, then again maybe not; professional journalists are rather exhaustive, if a bit concise. It is amazing what you come up with when granted a little superfluous leeway. Before we start with the specifics, it is time to meet our cyclical star via role-play. Place yourself in the exoskeleton of our hypothetical homopteran, whom we will call Fred.



Imagine you emerge after a very long, dark and sheltered childhood into the wide outdoors for the most amazing cicada rendezvous ever! You leave a tiny hole in the ground as you crawl up on a tree, emerge from your itchy pupa casing, and hang out to dry, change color and harden up that brand-new body. You only begin to experience the world around you when you realize how harsh it can be. Your new best friends, which you met while drying only 45 minutes ago, are disappearing by the hundreds down the gullets of all manner of larger creatures. Distraught, you crawl higher up into the canopy to harden up that exoskeleton. Days pass and now, with tougher skin and functional wings, the urge to sing overwhelms any residual sorrow. You start cranking out a marvelous buzz at about 90 decibels, announcing to all the world, which just happens to include female cicadas, where you are. The world responds and you have to escape more attempts on your life and endure the insults from the nearby homes that have sprung up since you burrowed underground long ago. Just as you wonder how long it takes a 4-bedroom, 2-bath ranch home to grow to this size, you hear from an open window "I don't care if it's a natural miracle! Locusts don't need to make this much noise!" *Locusts!* You did not spend seventeen years of underground adolescence to suffer misidentification from incompetents, thank you very much! The only appropriate response is to

'pump up the volume' and your on-board tymbales perform to perfection at a satisfying 100 decibels.

Weeks later, everything is as fine as can be expected. The gluttony died down shortly after it began. You still look like a hors d'oeuvre but it's not nearly as bad as that first night. Julie (your mate, remember?) flicked her wings in response just when you thought breeding was hopeless (it's a good thing that billions of females emerged along with billions of males). Now that it's over, all you can do is wish her well. Many of the choice saplings are covered with protective netting. The foresters have caused no small amount of frustration to protect 'their' trees. What's done is done, it's all in Julie's care now. As you lazily drink sap through straw-like mouthparts, you silently pray your sons and daughters have as good a life as you did, and hope they realize the miracle of it all before it's over. It would be nice to see how it all turns out but you are so very tired. Unable to move, you are content. *Life is good!*

Fred represents the lucky ones who get to do their part to ensure the future of the species, and die of old age. With his work completed, your virtual cicada experience is over and it is time to get real. Cicadas are 'currently' (read 'hopefully') classified as: **Kingdom-Animalia, Phylum-Arthropoda, Superclass-Hexapoda, Class-Insecta/Uniramia, Subclass-Pterygota, Order-Hemiptera** (also called True Bugs—formerly a distinct order, the cicada group Homoptera is now under Hemiptera), **Suborder-Hemiptera** (Auchenorrhyncha), **Family-Cicadidae**. Before we go any further, it is important to note that we also have non-periodical species in the county. The Dog-day (*Tibicen canicularis*) cicada nymphs need to develop below ground for 2-5 years before they emerge during the 'dog days' of summer in July and August. This is our most abundant species and it is possible to see individual Dog-days every year (Borror and DeLong 1954). This is a good thing for the Cicada Killer Wasp (*Sphecius speciosus*). These feed only on Cicadas and although they have a very plentiful year during a mass emergence, they don't wait around for the next one before we see them again (Dunn 1996).

Now we can talk about the epitome of subsurface patience among our flying insects. The genus *Magicicada* contains seven recognized species of periodical cicadas. They are the only cyclical cicadas in the entire world and they are found only in North America. Three of the species are of the 17-year variety and the remaining four mature underground in

13 years. The fact that there are more than two species of *Magicicada* is a recent discovery (Dunn 1996) and broods can consist of more than one species at a time. Apparently, all three 17-year *Magicicada* species (*spetendecim*, *cassini* and *septendecula*) are present in Brood XIII.

So what is a brood, exactly? A brood is a group of periodical cicadas that mostly emerge on the same schedule and in the same area, which is the only time we see the adults. There are 15 recognized broods in existence, 12 broods are of the 17-year variety and 3 are 13-year groupings. There is no overlap within the varieties, although a 13-year group may emerge on the same year as a 17-year group. This is all right! They rarely share space. For the most part, the 17's are only toward the northern range and the 13's favor mid-Illinois down to Louisiana. The Wisconsin/Illinois border (along with southern Michigan, New York and Massachusetts) is the northernmost latitude for even the 17-year *Magicicada* species.



You probably got a feel for the life of an adult cicada from Fred, but we will sum it up anyway. The nymphal **instar** (any arthropod that is in between molts or undergoing metamorphosis) crawls out of the soil and up onto an object. It sheds its casing, leaving it there attached to the aforementioned object for the collection of children. The **teneral** (pale and soft-bodied) adults head up into the upper leaves of trees for protection. They are almost white when they shuck their skin but darken in an hour. It takes days for them to 'dry' completely and for the males to sing. After mating, males weaken quickly while the females will live a little longer to lay the eggs (Borror and DeLong 1954). Adult cicadas can feed by sucking sap and even cause some damage to trees, but it is the egg laying that poses the real threat. Egg-laying females create slits in young twigs and deposit hundreds of eggs. It is not the nymphs, who quickly drop to the ground and start the cycle over again, but the depositing itself that weakens young trees (Yepsen 1984). It is a good thing for foresters that this only happens en masse every 13 or 17 years.

Why on Earth do they choose weird prime numbers for their life cycle? It is interesting that you ask that particular question. One theory is that larger prime numbers make it difficult for predators to synchronize with a brood's emergence pattern, thereby increasing

their numbers to 'welcome' the cicada extravaganza (Goles et. al. 2001). Another thought is that they spend so much time underground because they can. Above the soil surface is a dangerous place! Below ground there is some shelter to weather changes and predation (no insult intended to the underground predators, of course) so the more time they can spend there, the better (Essig 1952). Let us not forget that they may just do it for the 'wow' effect of such an impressive natural phenomenon. Who knows, maybe insects simply show off for the fun of it once in awhile.

We will not hear their loud singing (by the way, you have to have the cicada right next to your ear to experience all of the 100 possible decibels of song; still quite impressive for a little guy) again until 2024. Put your recipes away for a while (yes, there are many available directions for preparing cicadas out there in cyberspace, some as involved as any French dish), take out the earplugs and for heaven's sake, stop reading articles about large bugs! It's over already!

Mike

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RETZER NATURE CENTER

WAUKESHA COUNTY PARKS & LAND USE
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WAUKESHA, WI 53188

Return Service Requested

ALDO LEOPOLD WEEKEND!
Saturday, March 1
10:30 a.m. to 4:00 p.m.
"Aldo Leopold—A Prophet For Our Time"
"The Retzer Leopold Landscape"
Check out the Program Guide for more information.

A Sincere Thanks to All...

The following individuals or groups have donated to Retzer Nature Center since the last issue of CENTER LINE. Their support is greatly appreciated.

- Cash donation in memory of Bob Bache-Wiig from Nancy Abrahamson
- Cash donation from Betty Lou Tikalsky
- Cash donation in memory of Bob Adams from Hal Lahey
- Cash donation from Nancy Behnke